

Work Order ID 162987

Tuesday, June 20, 2017 11:05:12 AM

162987

U/R OK 6/17/20
Page 1

Item ID: D117-762-011 Accept *N900040100* Setup Start *NS1*
Revision ID: URF 17-547 Stop *NS2*
Item Name: Skidtube with Standard Wearplates Fits LH or RH
Start Date: 7/4/2017 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 7/14/2017 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: (N) Date: JUN 20 2017 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI9771	A								
IIN-D117-762	E								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	1.50							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D117-762-011								
110	Pick Kit	0.00							
110	Memo	0.00							
Packaging									
Packaging									

B162990

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☒ Quality ☐ Other ☐					
Date : <u>17/6/20</u>		Step #:		QTY Effective :			MRB (QSI042) Approval <u>DAS</u> <u>12</u> <u>9-89</u> <u>17/6/20</u>		
Description Work Order Deviation				Disposition				Completed By	
<u>Skid tube includes DSI 9775-011</u>				<u>Add to red decal</u> <u>" w/ DSI 9775-011 "</u>				Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Work Order ID 162987

Tuesday, June 20, 2017 11:05:13 AM

162987

Page 2

Item ID: D117-762-011 **Accept** ***N900040100*** **Setup Start *NS1***
Revision ID: URF 17-547 **Stop *NS2***
Item Name: Skidtube with Standard Wearplates Fits LH or RH
Start Date: 7/4/2017 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 7/14/2017 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start *NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.03							Smb 17/7/05
Quality Control									
130	Packaging	0.00							
130									
Packaging	Memo	0.00							Smb
Packaging	Identify and pack for shipping as per PPP D117-762-011 Location :FG081								17/7/05
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.10							17/7/5
Quality Control									

 JUL 05 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Tuesday, June 20, 2017 11:05:12 AM

Page 1



162987

D117-762-011

Required Qty: 1.00

Comments: IPP Rev:A07.06.11New Issue EC
IPP Rev:B 08-02-22 change to revA DD verified by:ec
IPP Rev C 08.12.19 incorporated DSI9435 EC verified by:DD
IPP REV:D 13.11.14 IIN REV.C DD VERF:JLM IPP
REV:E 15.06.11 IIN REV.D DD VERF:JLM IPP REV:F
17.01.17 PER CHG004 (dsi9771) DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN6C52A		Purchased	No			110	Each	23.0000	2	2			
AN6C52A BOLT DAS 27 9-89 Location Loc Qty Loc Code ST333 23 m137490 23 2 DAS 6 9-89 JUL 04 2017 28 9-89													
D5300-1		Manufactured	No			110	Each	1.0000	2	2			
D5300-1 GHL Bushing DAS 27 9-89 Location Loc Qty Loc Code ST162 1 161352 1 162924 DAS 6 9-89 JUL 04 2017 28 9-89													
D5301-1		Manufactured	No			110	Each	22.0000	2	2			
D5301-1 GHL Plug DAS 27 9-89 Location Loc Qty Loc Code ST162 22 162337 22 2 DAS 6 9-89 JUL 04 2017 28 9-89													
D117-762-041		Manufactured	No			110	Each	0.0000	1	1			
D117-762-041 Replacement Skidtube DAS 27 9-89 Must pick B162990 17/6/20 DAS 6 9-89 JUL 04 2017 28 9-89													

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																												
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																								
Root Cause		FAULT CATEGORY																																																														
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Misaligned/off center ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																															

Picklist Print

Tuesday, June 20, 2017 11:05:12 AM

Page 2

Work Order ID: 162987

162987

Parent Item: D117-762-011

D117-762-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/4/2017

Required Date: 7/14/2017

Start Qty: 1.00

Required Qty: 1.00

D3512-041

Manufactured No

110

Each

8.0000

2

2

D3512-041

Wearplate

**

JUL 04 2017

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST610

8

161911

8

2

MS21043-6

Purchased

No

110

Each

72.0000

2

2

MS21043-6

NUT

**

JUL 04 2017

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FG

20

103693

20

FP001

12

m135470

2

m137361

10

ST302

40

m137479

40

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D350-636 REV. J AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-636 REV. 3

REF FAA STC: SR00646SE
REF TCCA STC: SH99-7
REF EASA STC: EASA.10033942
REF BRAZIL STC: 2009S05-01

1.0 Purpose

It has come to DART's attention that the fit between the 12 mm Bolt required to fasten the aft most float mounting bracket of the Aerazur Floatation System to the existing provisions in the DART Skid tubes may be too loose. In such cases, it is acceptable for the installer or maintainer to proceed with the following steps:

2.0 Blade Fitting Rework

- 2.1 Locate $\varnothing 0.508$ in (12.9mm) hole in the D3488-041/-042 Blade Fittings and enlarge to $\varnothing 0.610$ in (15.5mm), then ream to $\varnothing 0.626$ in $+0.001$ in/ -0.000 in (15.5mm $+0.15/-0$) as shown in Figure 1 of this Service Instruction.
- 2.2 Deburr and touch up finish in accordance with Chapter 5 of ICA-D350-636.

3.0 Bushing Fabrication

- 3.1 Fabricate qty(1) bushing for each Blade Fitting Assembly in accordance with Figure 2 of this Service Instruction and to the following material specifications: 7075-T73 (or 7075-T7351/T73510/T73511) round bar per AMS-QQ-A-200/11 or AMS-QQ-A-225/9.
- 3.2 Ensure the bushings can be installed into the holes that have been reworked on the D3488-041/-042 Blade Fitting Assemblies: the edges of the bushing should not protrude from the surface of the D3488-041/-042 Blade Fitting Assemblies. Adjust length of bushings to clear as required.

4.0 Installation

- 4.1 Bond bushings to the D3488-041/-042 Blade Fitting Assemblies using Proseal 890 Class B or AMS-S-8802 Class B sealant or 3M DP460 Scotch-Weld Epoxy Adhesive in accordance with the manufacturer's instructions. Ensure the inside of the bushings are free from sealant or adhesive. Refer to Figure 3 of this Service Instruction.
- 4.2 Allow sealant or adhesive to cure in accordance with the manufacturer's instructions.
- 4.3 Install the reworked D3488-041/-042 Blade Fitting Assemblies in accordance with Chapter 3.5 of IIN-D350-636 or Chapter 32.4 of ICA-D350-636.

5.0 Weight and Balance

There is a negligible weight change associated with this modification.

SHOP COPY
RETURN TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 162987

JUN 20 2017

A	NEW ISSUE	MB	14.10.20
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		DSI 9711	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		BLADE FITTING REWORK	NTS
DATE	14.10.20	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

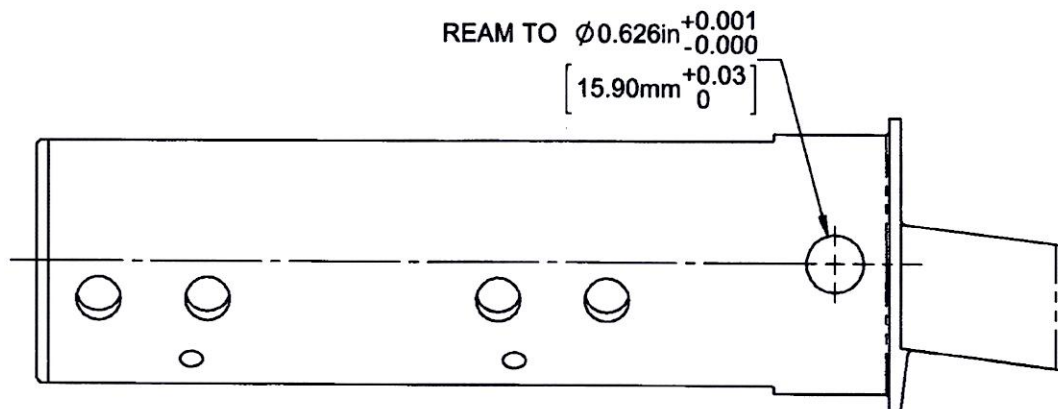


FIGURE 1: Blade Fitting Assembly Rework

(D3488-042 Shown, D3488-041 Similar)

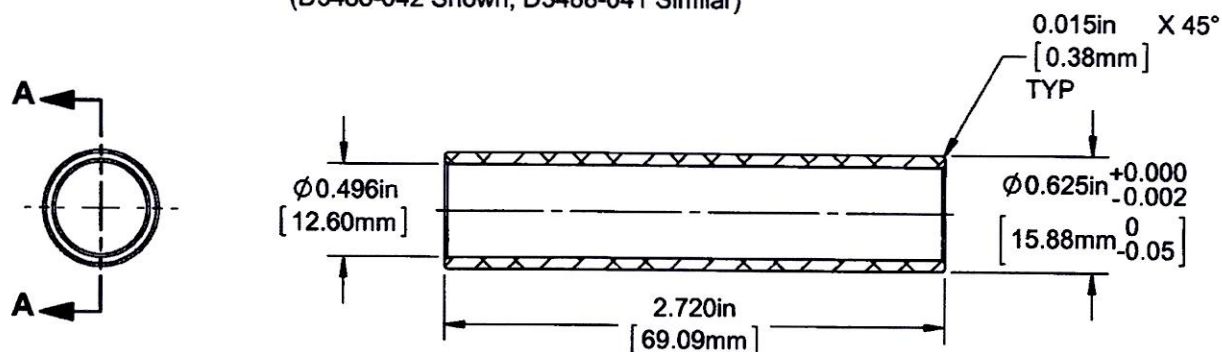


FIGURE 2: Bushing Detail

SECTION A-A

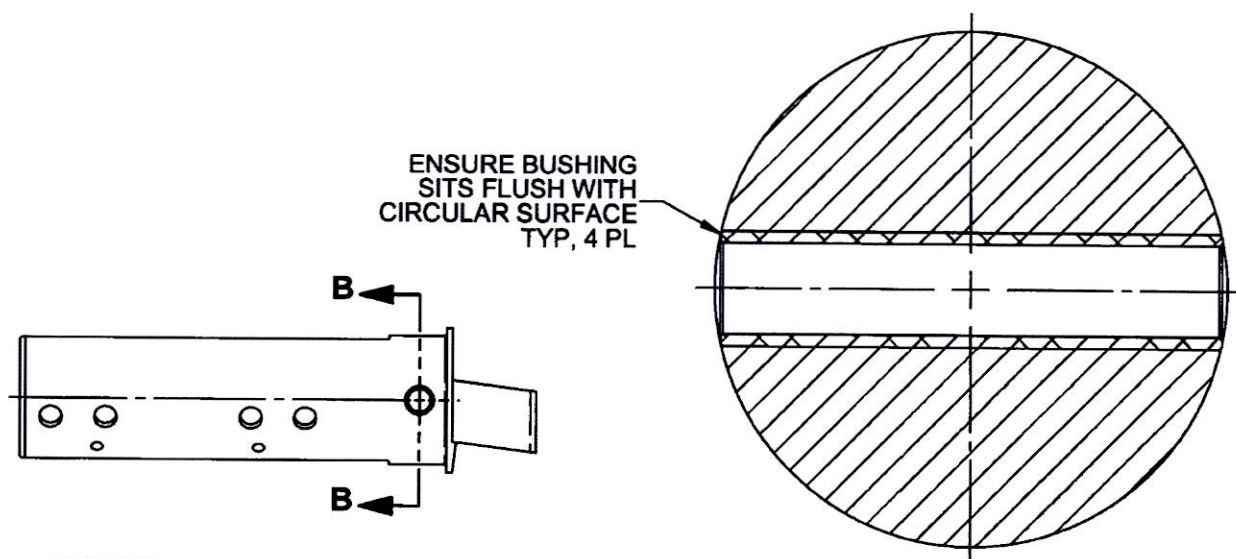


FIGURE 3: Assembly Detail

SECTION B-B
SCALE 4X

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC.	
DRAWN	<i>[Signature]</i>	KENT, WA	
CHECKED	<i>ASS</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>N/A</i>	DSI 9711	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BLADE FITTING REWORK	NTS
DATE	14.10.20	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

5.0 PARTS LIST

5.1 D117-762-011 Skidtube Parts List

Item	Qty -011	Qty -041	Part Number	Description
	X		D117-762-011	SKIDTUBE INSTALLATION
	1	X	D117-762-041	REPLACEMENT SKIDTUBE
1		1	D3582-041	SKIDTUBE ASSEMBLY
2	2		**1121-51002	SKID SHOE
3	2		**1121-51102	CLAMPING RING
4	8		**LN9380M8X45	HEXAGON BOLT
5	8		**LN9023A8-1.4544.9	LOCKING WASHER
6	8		**LN9025-0815K	WASHER (OR LN9025-0815L)
10		1	*D2965	CAP
11		2	***AELS-1032-225	INSERT
12		2	*AN3C5A	BOLT
13		2	*NAS1149C0332R	WASHER (OR AN960C10L)
20A		1	*D3508-9	WEARPLATE
20B		1	*D3558-9	GASKET
21A		1	*D3508-3	WEARPLATE
21B		1	*D3558-3	GASKET
22A		1	*D3508-11	WEARPLATE
22B		1	*D3558-11	GASKET
23A		1	*D3508-13	WEARPLATE
23B		1	*D3558-13	GASKET
24		36	*AELS-1032-130	INSERT
25	8	28	*AN3C4A	BOLT
26	8	28	*NAS1149C0332R	WASHER (OR AN960C10L)
27	2		D3512-041	WEARPLATE
30		2	*AELS-1032-130	INSERT
31		2	*AN3C4A	BOLT
32		2	*NAS1149C0332R	WASHER (OR AN960C10L)
50	2		AN6C51A	BOLT
51	4		D3864-1	BUSHING
52	2		MS21043-6	NUT

* PART IS INCLUDED WITH D3582-041 SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

REFERENCE

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-762 REV. E AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-762 REV. 4

REF FAA STC: SR01853SE

REF: TC LETTER OF ACCEPTANCE RDIMS-4374899

REF EASA STC: EASA.10017063

1.0 PURPOSE

The purpose of this Dart Service Instruction (DSI) is to replace the ground handling lugs (D3864-1 Bushings, AN6C51A Bolts and MS21043-6 Nuts) on the D117-762-XXX Skid tubes with a structurally superior lug design (D5300-1 Bushings, D5301-1 Plugs, AN6C52A Bolts, MS21043-6 Nuts) as shown in Figure 1. The new hardware will be included in D117-762-011 @ CHG 004 and subsequent.

2.0 INSTALLATION

For D117-762-011 @ CHG 004 and subsequent, the ground handling hardware should be installed as follows:

- 2.1 Loosely install (qty 2) D5300-1 GHL Bushing & (qty 2) D5301-1 GHL Plug wet with Proseal 890 or MIL-S-8802 Class B2 Sealant in location shown in Figure 1.
- 2.2 Install (qty 2) AN6C52A Bolts and (qty 2) MS21043-6 Nuts in accordance with Figure 1. Clean up squeezed out Proseal and apply fillet seal around D5300-1 & D5301-1.
- 2.3 Torque AN6C52A Bolts 160 - 190 in-lbs (18.1 - 21.5 N-m).

3.0 PARTS LIST

For D117-762-011 @ CHG 004 and subsequent, the Part List in IIN-D117-762 and ICA-D117-762 is modified as follows:

IS

ITEM	QTY -011	PART NUMBER	DESCRIPTION
	X	D117-762-011	SKIDTUBE INSTALLATION
50	2	AN6C52A	BOLT
51A	2	D5300-1	GHL BUSHING
51B	2	D5301-1	GHL PLUG
52	2	MS21043-6	NUT

A	NEW ISSUE	RF	17.01.09
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE, LTD EUGENE, OR	
DRAWN	RF		
CHECKED	WK	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9771	SHEET 1 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.		GHL UPGRADE KIT	NTS
DATE	17.01.09	COPYRIGHT ©2017 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE, LTD.	

Work Order ID 162987

162987

Page 1

Tuesday, June 20, 2017 11:05:12 AM

Item ID: D117-762-011

Accept

N900040100

Setup Start *NS1*

Revision ID: URF 17-547

Stop *NS2*

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/4/2017 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 7/14/2017 Req'd Qty: 1.00 *1*

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: Date: JUN 20 2017

Tooling:

Date:

Stop *NR2*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

DSI9771

A

IIN-D117-762

E

JUN 27 2017

100

Document Control

0.00

100

DC

DOCUMENT CONTROL

1.50

Doc.Control -USB or Paperwork

Memo

Photocopy bluefile & type labels per PPP D117-762-011 CHG004

DAS
5
9-89

JUN 28 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

United States of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SR01853SE

This certificate, issued to

Dart Aerospace USA, Inc.
190 S. Danebo Ave.
Eugene, OR 97402

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 27 of the Federal Aviation Regulations.

Original Product—Type Certificate Number:

H13EU

Make:

Eurocopter Deutschland GMBH

Model:

MBB-BK 117 A-1; MBB-BK 117 A-3; MBB-BK 117 A-4;
MBB-BK 117 B-1; MBB-BK 117 B-2; MBB-BK 117 C-1;
MBB-BK 117 C-2

Description of the Type Design Change: Installation of skid tubes manufactured in accordance with Master Drawing List (MDL) MDL-D117-762, Revision D, dated July 2, 2013, or later Federal Aviation Administration (FAA) approved revision; installed in accordance with Installation Instructions IIN-D117-762, Revision B, dated January 24, 2013, or later FAA-approved revision; and maintained in accordance with Instructions for Continued Airworthiness (ICA) ICA-D117-762, Revision 1, dated February 13, 2013, or later FAA-accepted revision.

Limitations and Conditions: Approval of this change in type design applies only to the rotorcraft model listed above. This approval should not be extended to other rotorcraft of this model on which other previously approved modification are incorporated unless it is determined that the relationship between this change and any other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that rotorcraft. A copy of this certificate, the MDL, installation instructions, and ICA must be maintained as part of the permanent record of the modified rotorcraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: November 22, 2007

Date reissued: October 28, 2015

Date of issuance: June 26, 2008

Date amended: July 31, 2013



By direction of the Administrator


(Signature)

for Manager, Seattle Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.